

WHAT IS CLAIMED IS :

1. A saw blade for cutting steel-reinforced structural material comprising a steel circular disk(10) having an opening(11) at the center for connection with the shaft of a motor-driven tool, and having cutting segments(12) attached at predetermined intervals along the periphery of the disk, and including the particulate bearing layer on both side surfaces of the disk,

5 the particulate bearing layer being formed from one or more particle materials selected from the group consisting of diamond, CBN, Al_2O_3 , Zr_2O_3 , ZrO_2 , WC and SiC or from other mixed hard particle materials through a process of electroplating or plasma spray coating,

10 the particulate bearing layer comprising circular rings(21) each with a fixed width and positioned in the central area on both side surfaces of the disk(10), and a plurality of streamlined-wings(22) disposed around said rings at predetermined intervals, the wings extending from the outer edge of the ring(21) on each side surface toward 15 the periphery of the circular steel disk(10), wherein the wings(22) on one side (front) surface of the circular steel disk(10) are radially overlapped in position with the wings on the other side (back) surface of the circular steel disk(10).

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25 2. The saw blade according to Claim 1, wherein the wings(22) on one side (front) surface of the circular steel disk(10) are overlapped in a full and aligned manner with the wings(22) on the other side (back) surface of the 30 circular steel disk(10).

3. The saw blade according to Claim 1 or 2, wherein both circular arcs($22r_1$, $22r_2$) defining each of the wings(22) have the same or different radius of curvature and have different centers of curvature, said circular arcs extending substantially in radial direction, and said wings(22) are so shaped as to get wider gradually with the radial distance from said ring(21) to the outer periphery of the circular steel disk(10).

10 4. The saw blade according to Claim 1 or 2, wherein the circular steel disk(10) is formed on its outer periphery with a plurality of slits(13) at predetermined intervals.

15 5. The saw blade according to Claim 1 or 2, wherein the segments attached around the periphery of the circular steel disk at predetermined intervals are the turbo-type segments exhibiting planar jig-jag profiles due to irregularities on the both side surfaces of segments.

20 6. The saw blade according to Claim 1 or 2, wherein the portions of wings(22) overlapped in position on both side surfaces of the circular steel disk(10) are formed with one or more through-holes(22H).

25 7. The saw blade according to Claim 6, wherein the plural through-holes(22H) formed on the wings of particulate bearing layers increase in size with the radial distance from the side of the ring(21) to the side of the periphery of the steel disk(10).